

AMENDMENT TO THE SPECIFICATION

Please amend the paragraph beginning at page 8, line 29 and ending on page 9, line 17, as follows:

Several optional functions made feasible by other preferred embodiments are describe below. One function already mentioned is the ability to translate or convert the data during the drill-through operation, and to select the actual conversion by means of a parameter. Earlier applications not incorporating embodiments of the present invention were only able to perform data conversion or manipulation of drill-through parameters within the report-producing application, and the required functions were stored with the report schema. This meant that the report was often used specifically for one drill-through since the report column used in the context filter would only make sense for that particular drill-through. By enhancing the drill-through service so the input and output conversion functions are part of the drill-through model, it is possible to decouple them from the report itself (or its description and schema). In other words, any data conversions required for a drill-through path are encapsulated in the drill-through service, rather than in the report (and its schema). This is illustrated in the Figure 3, in which a drill-through source or target is generalized to a collection of parameters 300, 320, 340, 360 as shown each related (or mapped) over a parameter mapping including a function 305, 325, 345, 365 respectively to one of the items 310, 330, 350. Note that more than one parameter can map to a single ~~drill-through~~ drill-through item as is shown in ~~the figure~~ Figure 3, where parameter 340 and parameter 360 both map to item 350 through their respective functions in parameter mappings 345, 365. --

Please amend the paragraph beginning at page 9, line 18 and ending at page 9, line 22 as follows:

Another feature made possible by embodiments of the present invention is a drill-through path. A drill-through path is a collection of source and target

parameter ~~mappings~~ mappings. The drill-through path effectively couples the source and target objects together. A single ~~drill-through~~ drill-through target can have many drill-through sources and ~~vice-versa~~ vice-versa. This aspect is illustrated in Figure 3, described earlier.

Please amend the paragraph beginning at page 9, line 23 and ending at page 9, line 26, as follows:

Figure 4 shows an embodiment in which several bi-directional drill-through mappings are illustrated, 400-402, 420-422, ~~430-432~~, 440-442, 460-462, each having different mapping functions for each direction, 404 and 406, 424 and 426, 444 and 446, and 464 and 466.

Please amend the paragraph beginning at page 10, line 28 and ending on page 11, line 9 as follows:

A meta-data model is the model on which the reports are based. It is sometimes convenient to work with the underlying metadata, rather than the reports themselves. Therefore, the concept of defining one or more drill-through paths between meta-data models will be described below. In the embodiments described above, a drill-through model designer is able to define a drill-through path from one report to another. The designer (user) may optionally define any parameters to be used in the context filter when ~~navigation~~ navigating from one report to another. In addition, drill-through services embodying the invention support the definition of one or more drill-through paths between the different meta-data models. This has the advantage that reports based on the meta-data models can make implicit use of the already defined drill-through paths. The invention therefore affords a generalized way of assigning drill-through paths between reports without having to explicitly define drill-through paths between all reports. This is done by providing a list of potential drill-through paths between the query items of a model.

Please amend the paragraph beginning at page 13, line 12 and ending at page 13, line 15, as follows:

Using these parameter mappings, it is possible to ~~drill-through~~ drill through from the sales report to the HR report and filter on either the salesperson's name or on the manager's name. The parameterised drill-through service of the present invention therefore allows the user to obtain the answer to either or both of the two questions:

Please amend the paragraph beginning at page 13, line 29 and ending at page 14 line 2 as follows:

Expanding on this general model of drill-through usage, it is also possible to define general drill-through paths from a meta-data model to specific reports. Figure 6 shows a Sales model 600 having two ~~drill-through~~ drill-through paths 630, 635 defined to two separate reports: an Order Detail Report 620 and an Employee Expenses Report 625.

Please amend the paragraph beginning at page 14, line 26 and ending at page 14, line 31 as follows:

In another case, the cube parameters 710 are mapped to a model. This is a generalized case which is similar to the model to model case previously described. ~~Drill-through~~ Drill-through paths 795 and their related parameter mappings 781 are defined between the cube 710 and the Model 780. As a consequence, any reports that are based on the model can drill through into the cube assuming that the required parameters (columns) are included in the report.